



Standardized Space Trainer



Standardized Space Trainer (SST)

U.S. AIR FORCE

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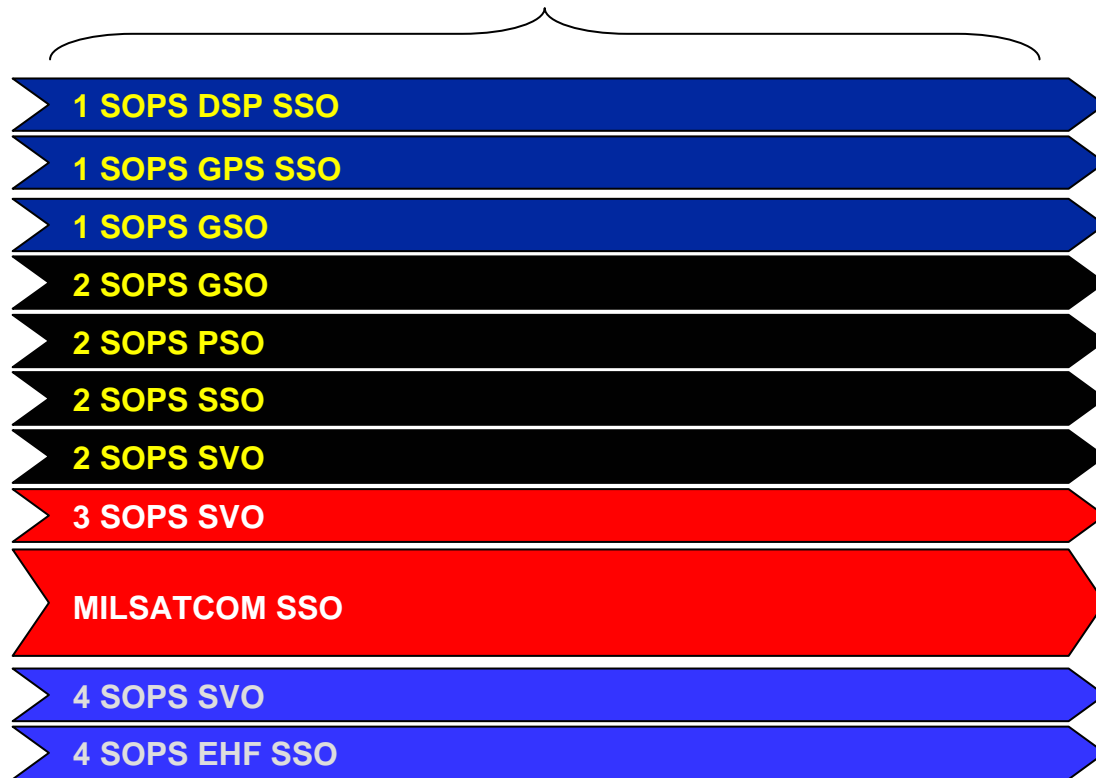
Overview

- **Training Challenges**
- **New Method**
- **Need for Standardized Space Trainer for 50 & 460 OSS IQT and Unit Training**
- **Current Status of Standardized Space Trainer (SST)**

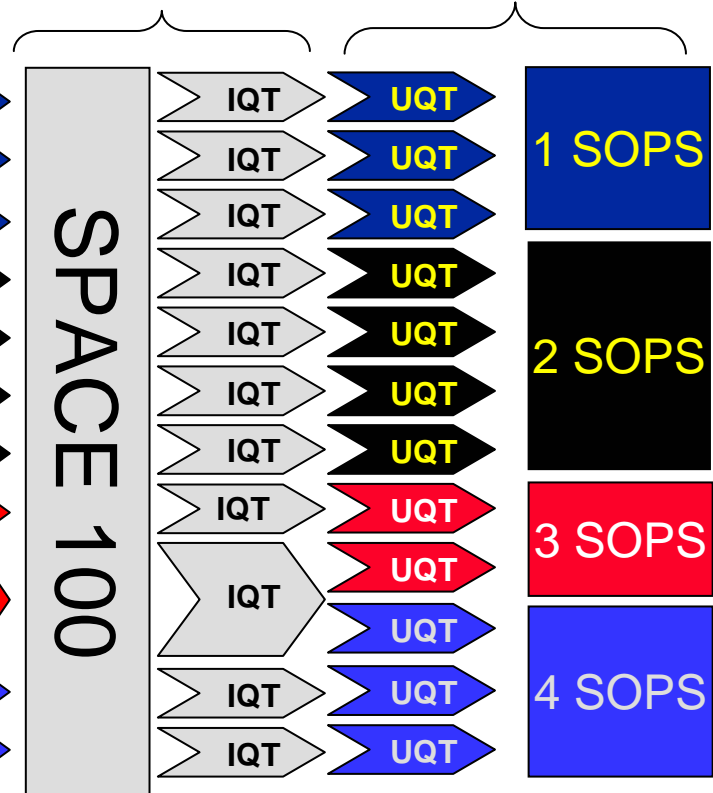
Training Challenges



Trained Personnel Requirements (TPR)



AETC Courses

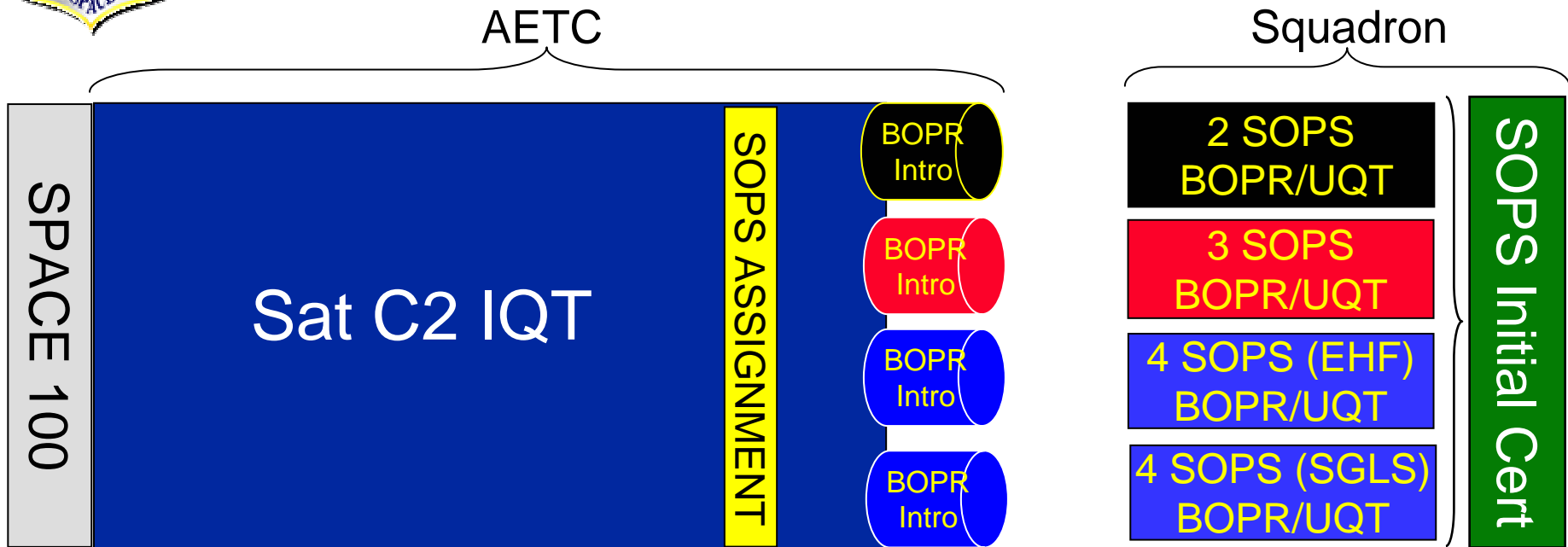


Squadron Training



- Stove-piped courses specialized knowledge for a single position, in one SOPS
- TPR projections done 2-3 yrs previously are never accurate due to changes
- Limits manning flexibility to put new operators where they are needed
 - Vacant positions, positions that lack experience

New Training Model



New Space Operations Initial Qualification Training (IQT) course developed and planned for Oct 06 (CY) at VAFB

- SOPS Assignment executed 3/4 into training
 - Ensures manning balance throughout SOPS and mission readiness
- Intro to IQT BOPR course provided at the end of IQT training
 - Mission specific introduction with basic performance requirements



New Sat C2 IQT Course ("White Sat")

- Develops new operators with in-depth, fundamental knowledge of overall satellite system vs. stove-piped, performance-centric, system-specific focus
 - Attitude Control Methods
 - Electrical Power Subsystems
 - Satellite Contact Procedures
 - Thermal Control Systems
 - Ground System Basics
 - TT&C
- Uses examples from operational satellites and their control systems to reinforce understanding
- Includes basic hands-on simulator training to prepare students for UQT at Schriever (using "in-place" resources)
- Initial Qualification Training (IQT) will be modeled similar to Undergraduate Pilot Training

End Goal: Education Focus Leading to Flexibility and Adaptability in Follow-on Operational Training



What is a Standardized Space Trainer (SST)

COTS Hardware, Common Operating System and Network Capability

- Standardized Space Trainer provides the HW/SW platform from which Initial Qualification Training and System Specific Training can be launched – not a generic training system
- Software applications would be developed by SPOs to execute system specific space training missions -- GPS OCX, SBIRS, TSAT, etc, would have their own applications and operate on SST just like opening Word, Excel, Photoshop, etc on a desktop PC
- Capable of both Crew and Positional Training
- Reduces Operations & Maintenance (O&M) costs associated with having multiple stovepipe space system simulators at VAFB, SAFB and Buckley
- Standardized Space trainer used for training - not testing and development
- Distributed Mission Operations – Space (DMO-S) compatible

Standardized Space Trainer (SST)



- VISION: No need for individual, stovepipe and expensive training space systems -- Standardized Space Trainer (SST) could be used for;
 - AETC (533TRS) Initial Qualification Training (IQT)
 - The new Sat C2 Course: software developed to serve as “White Sat” (i.e. T-38 “white jet” trainer at UPT) to teach fundamentals of: behavior of common military satellites, sub-systems (common to all satellites--non-payload-specific), space flight, orbital mechanics, etc and satellite ops (contact procedures; ground system basics; TT&C)
 - Basic Operator Course (BOPR): Introduction to assigned Satellite System
 - 50 OSS Unit Training (Qualification and Proficiency Training)
 - Software developed to support 2, 3 and 4 SOPS training requirements
 - 460 OSS IQT and Unit Training (Qualification and Proficiency Training)
 - Software developed to support SBIRS C2 and Missile Warning training

Between the 533TRS, 50 OSS and 460 OSS eight different training systems are currently used for IQT and Unit Training - New Systems like OCX, TSAT and SBSS could add more



Current Status Standardized Space Trainer

- STAO, HQ AFSPC/A3 & A5, 50 OSS, 381TRG and HQ AETC have been working closely to make a standardize training system a reality for space
- Lt Gen Hamel (SMC/CC) fully supports standardized space ops trainer and has assigned SMC/SN to lead acquisition effort for Standardized Space Trainer
 - Request for Information (RFI) released to industry 12 Apr 06
 - Industry responses originally due back 24 May 06 - extended one week
 - Education and Training Technology Applications Program (ETTAP)
 - Submitting SST concept for ETTAP funds – expect \$500K (FY06)
 - Early acquisition efforts being worked in parallel with AFSPC requirements process – requirements definition & CONOPS
- Space TAG has assigned action to HQ AFSPC/A3T to establish Standardized Space Trainer (SST) TPT
 - SST TPT will be responsible for STP and accomplishment of TSRA



Utilization/Summary

- **Utilization Strategy**
 - Acquisitions currently at draft RFP stage could include flexibility to include SST
 - Currently fielded programs could benefit from SST
 - Training systems considering mod/upgrade would cost compare SST option
- **Summary**
 - Paradigm changing to standardized space training system away from expensive, unique, stove-piped systems
 - RFI inputs now due 31 May 2006

For more information see:

http://ax.losangeles.af.mil/axl/stao/standardized_trainer.html



Backup



How it all fits together at 50 OSS

